Course unit title:	Web Programming
Course unit code:	CSC209
Type of course unit: (Compulsory/optional)	Compulsory
Level of course unit: (First, second or third cycle)	Bachelor (1st cycle)
Year of study:	2
Semester when the unit is delivered:	4
Number of ECTS credits allocated:	6
Name of lecturer(s):	TBA

Learning outcomes of the course unit:

Upon succesful completion of this course students should be able to:

- Describe the process of creating a packaged app
- Manage application state and manipulate application data storage
- Select and configure HTML5 tags to display text, graphics or play media files
- Build a user interface using HTML5
- Use cascading style sheets to: a) control content positioning, flow and overflow; b) arrange user interface content; c) manage the flow of text content; d) manage the graphical interface
- Use JavaScript to: a) update the user interface; b) animate pages; c) access data; d) program touch enabled interfaces and e) access resources of the device of the operating system
- Work with additional HTML5 APIs such as: a) geolocation; b) web workers; c) websockets; and d) file API

Mode of delivery:	Face- to- face
Prerequisites and co-requisites:	CSC132, CSC133
Recommended optional program components:	None

Course Contents:

Objective:

This course covers HTML5, CSS and JavaScript programming. The primary goal of the course is to introduce students to the possibilities that exist with using the latest HTML5

draft and manipulating the content by means of CSS and/or JavaScript.

Description:

The class will have extensive usage of CSS and JavaScript to manipulate HTML5 content pages and applications.

Understanding and managing the application life cycle
Creating apps; the run-time environment; app-package; app-container; application states; understanding touch interface and gestures; debugging HTML5 apps;

Using HTML5 to build the interface
Attributes; elements; nesting; text elements, graphics; the canvas object; using SVG for graphics; media tags (audio, video). Structuring and HTML document (header, selection, nav, article, aside); creating tables and lists; input and forms, validation of input

Using CSS
Linking CSS to HTML; separating content from style; selectors; fonts; positioning; content flow and overflow; simple layouts; using flexible boxes; grid layouts; using grid template; using regions for text flow management; creating graphic effects (round corners, shadows and more); transformations (2D & 3D); SVG filters

Using JavaScript
Basics, functions, methods, jQuery and other 3rd party libraries; accessing page element; responding to event; showing and hiding elements; adding and updating content; creating animations; working with images and shapes; sending and receiving data; reading and writing files; input validation; using cookies; working with the touch interface; additional HTML5 APIs (geolocation, web workers et. al.); accessing system resources (memory, location, camera)

Recommended or required reading:	HTML5 Application Development Fundamentals, Microsoft Official Academic Course (MTA Exam 98-375) The essential guide to CSS and HTML web design, Craig Grannell, Springer Learning Web Design, A beginner's guide to HTML, CSS, JavaScript and Web Graphics, J.N. Robbins, O'Reilly Head first HTML5 programming, E. Freeman & E. Robson, O'Reilly
Planned learning activities and teaching methods:	Class Instruction: 42 Hours Consultation: 15 Hours
Assessment methods and criteria:	Coursework 60% Examinations 40% 100%
Language of instruction:	English
Work placement(s):	No
Place of Teaching:	Personal Computer Laboratory European University Cyprus, Nicosia